KHAYKOV, A.Z.

Self-oscillators under large circuit losses. Radiotekhnika 12 no.1:58-62 Ja '57. (MLRA 10:3)
(Oscillators, Electron-tube)

KHAYKOV, A.Z.

AUTHOR: HAJKOV,A.Z. PA - 2018
TITLE: An Autogenerator in the Case of strong Fading of the Oscillation Circuit. (Avtogenerator pri boljših zatuhanijah kontura. Russian)
PERIODICAL: Radiotekhnika, Vol 12, Nr 1, pp 63-72 (U.S.S.R.)
Received: 2 /1957 Reviewed: 3 / 1957

ABSTRACT: The present work investigates the influence exercised by the complete fading of the oscillation circuit on the frequency and the form of self-oscillation and on the energetic correlations in the autogenerator. At first the equations for self-oscillations are sought; only a single-oscillation circuit autogenerator with inductive back-coupling is investigated. A graph shows the equivalent scheme of such an autogenerator at high frequencies. The system of differential equations is set up from which the final formula is derived. When studying the energetic dependences in the autogenerator it is of essential importance to know the shape of self-oscillations. Such a shape was obtained by RAMM (his article publ. in R 9, Vol 1, 1954). The linear method cannot be used for energetical computations because it is too cumbersome. The equation takes the form of a differential equation in each of the domains. Difficulties arise when combining equations that correspond to different domains. A complicted system of transcendental equations is obtained. The next chapter deals with the shape of self-oscillations and it is proved that the mains voltage and its first derivate with respect to time and correspondingly also the required time function y and $\frac{dy}{dt}$ (where t is the eigentime of the system) change continually with time on the occasion of transition from one domain to another. A diagram shows the

CARD 1 / 2

PA - 2018

An Autogenerator in the Case of strong Fading of the Oscillation Circuit.

function y in the case of different lengths of δ' (total fading of oscillation circuit in consideration of load). In the last chapter the energy correlations are investigated, and equations together with the corresponding diagrams are set up. The exact solution of the equations for the autogenerator according to domains shows that frequency and shape of self-oscillations depend on the complete fading of the oscillation circuit. If δ' is increased, the frequency and the amplitude of the first overtone diminish and the amplitude of higher overtones increase. The efficiency curves under load and the curves of the general degree of efficiency of the generator attain their maxima at certain values of δ'.

ASSOCIATION: Not given
PRESENTED BY:
SUBMITTED:
AVAILABLE: Library of Congress

CARD 2 / 2

27994
S/194/61/000/004/037/052
D266/D302

9,4220 (1052, 1331)

AUTHOR: Khaykov, A.Z.

TITLE: On the external loading of klystrons

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika, no. 4, 1961, 17, abstract 4 G108 (Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR, 1960, no. 1, 73-84)

TEXT: The amplification of a klystron can be given as a function of complex frequency. The poles and zeroes of this function completely determine the properties of the klystron. The external loading changes the number and position of the zeroes and poles of the amplification function. The analysis is carried out with the aid of these poles and zeroes for various external loads. It is shown that non-periodical loading can change the effective attenuation of each resonator, and frequency characteristics analogous to those of cascade amplifiers can be obtained, but with an increased frequency band. It is possible to increase the bandwidth by employ-

Card 1/2

On the external loading of klystrons

ing a resonant external load, but the obtained frequency characteristic differs from the usual characteristic of a cascade amplifier. It is suggested that by allowing a certain mismatch in the input line larger amplification can be achieved in the same frequency band. The best solution is to employ coupled circuits only in the last stage and choose appropriately the parameters of the other resonators. Under these circumstances an output power can be obtained which is close to the nominal in the given bandwidth. [Abstracter's note: Complete translation]

4+

Card 2/2

40130
S/108/62/017/008/005/005
D409/D301

9,2580

AUTHOR: Khaykov, A.Z., Member of the Society (see Association)

TITLE: On a multiloop output circuit of a powerful high-frequency oscillator

PERIODICAL: Radiotekhnika, v. 17, no. 8, 1962, 32-42

4

TEXT: The design of the output circuit of a high-frequency oscillator is considered, a system of coupled circuits being used for this purpose. Formulas are derived which permit calculating the circuit parameters by means of given parameters of Chebyshev's characteristic. The influence of nonlinear operating conditions of powerful oscillators on the frequency characteristics is considered. In calculating the energy relationships, the author proceeds from an equivalent circuit, shown schematically. The problem of obtaining optimal frequency characteristics of the output circuit, is solved in two stages: The linear problem and the effect of the nonlinear processes. Simplifying assumptions are made and design formulas

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On a multiloop output circuit ...

are obtained for the circuit parameters in terms of the given parameters of Chebyshev's frequency characteristic. These formulas are used for determining the coupling coefficients between the circuits and the characteristic impedance of the intermediate circuits. Then the band pass is determined. The effect of nonlinear operating conditions on the frequency characteristics was studied on the example of a tube oscillator, which made it possible to use Z.I. Model and N.S. Fuzik's method (Ref. 2: Radiotekhnika, v. 14, no. 5, 1959). Conclusions: The obtained solutions permit calculating the parameters of the output circuit of the oscillator so as to obtain a frequency characteristic (in the linear approximation) in the form of Chebyshev's characteristic for any number of coupled circuits (resonators). These solutions can be also used for studying general relationships, such as the dependence of the bandwidth on the number of circuits, on the condition that the energy regime of the oscillator remains unchanged. Thereby it was found that the band pass first increases sharply, compared to that of a single circuit, when the number of coupled circuits is increased to n = 3 - 5 approximately, and thereupon the increase (with n) continues slowly. The study

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On a multiloop output circuit ...

of the influence of nonlinear operating conditions on the frequency characteristics, showed that in the case of mismatch, corresponding to excess-voltage conditions, the frequency characteristic undergoes changes, compared to the characteristic calculated in the linear approximation. These changes amount to a reduction in the marginal maxima of Chebyshev's characteristic, and a narrowing of the band pass. There are 12 figures.

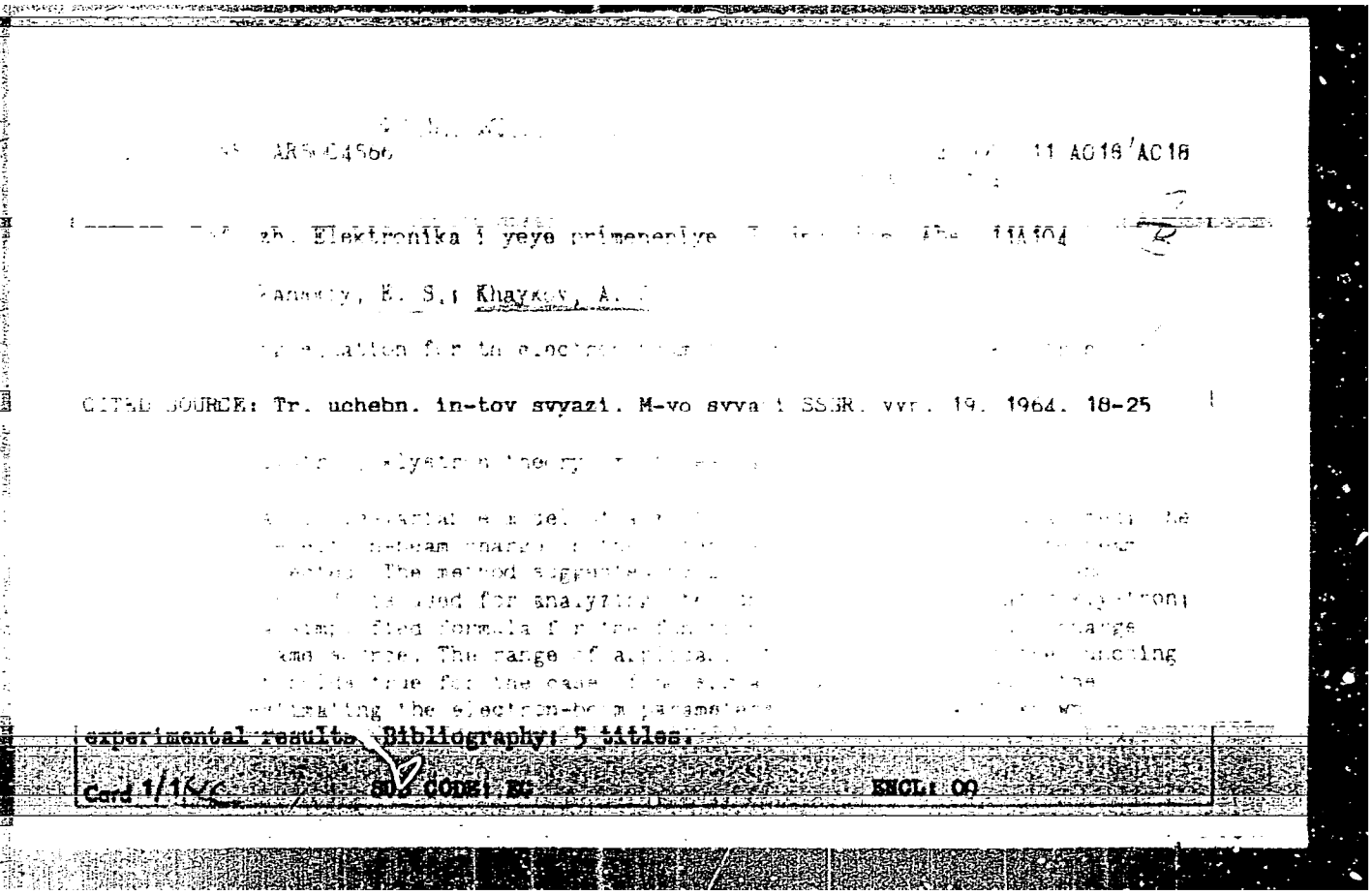
ASSOCIATION: Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi im. A.S. Popova (Scientific and Technical Society of Radio Engineering and Electrical Communications imeni A.S. Popov)

SUBMITTED: January 18, 1962

Card 3/3

KHAYKOV, Aron Zalmanovich; KUKK, K.I., otv. red.; KOKORIN, Yu.I., red.

[Power amplifiers using multicavity klystrons] Moshchnye usiliteli na mnogorezonatornykh klistronakh. Moskva, Izd-vo "Sviaz'," 1964. 167 p. (MIRA 17:11)



AR5004960 11 AC16/AC16

zh. Elektronika i yeye primeneniye

[illegible], E. S.; Khayrov, A. [illegible]

[illegible]

CITED SOURCE: Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR. vyp. 19. 1964. 18-25

[illegible]

experimental results. Bibliography: 5 titles.

Card 1/1 SUB CODE: EC ENCL: 00

ACCESSION NR: AP4042893 S/0108/64/019/007/0042/0051

AUTHOR: Khaykov, A. Z. (Active member)

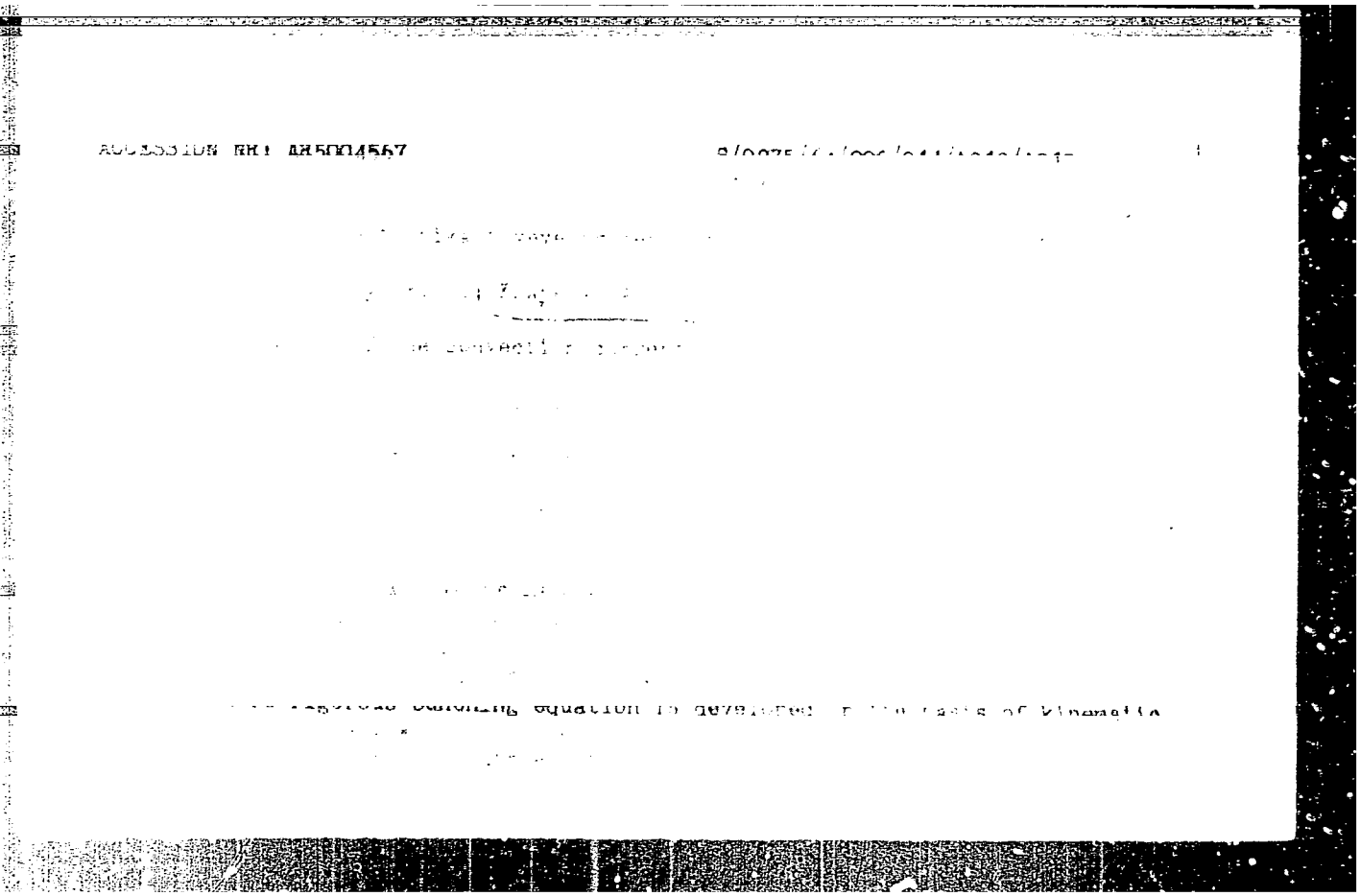
TITLE: Power relations in a high-power broadband klystron amplifier

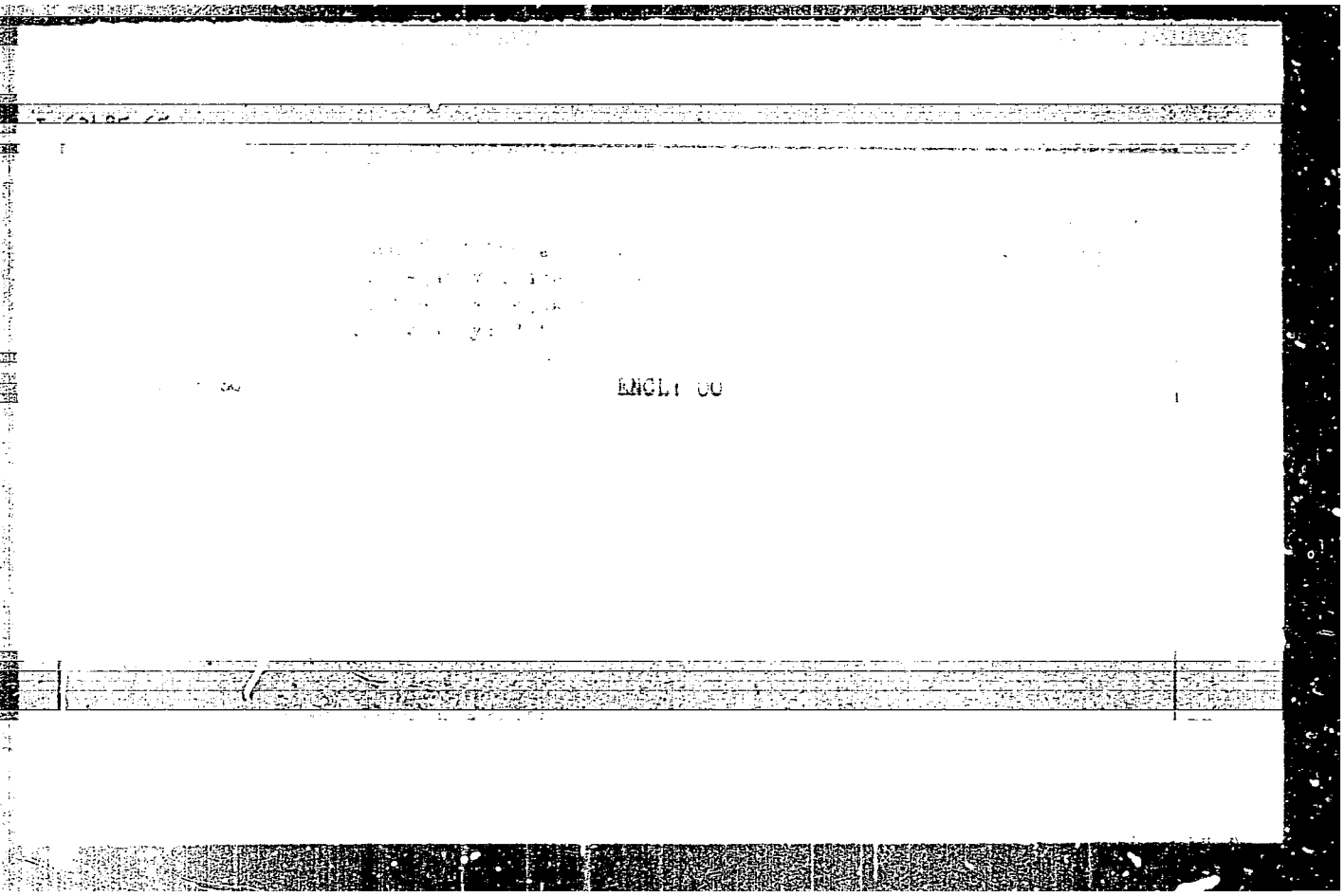
SOURCE: Radiotekhnika, v. 19, no. 7, 1964, 42-51

TOPIC TAGS: amplifier, klystron amplifier, broadband klystron amplifier

ABSTRACT: A theoretical investigation of the power relations in a klystron is reported. The beam perveance, accelerating voltage, output-resonator characteristic impedance, output-gap transit angle, and other parameters determining the klystron design are studied. It is assumed that the current exciting the output gap is independent of the frequency and that the excitation power ensures the best possible bunching of the electron beam. Formulas describing the effect of the klystron parameters and load parameters on the klystron electron efficiency are developed. They are useful in binding the klystron power for a specified frequency bandwidth. On the other hand, klystron parameters ensuring a maximum efficiency can be determined for a specified klystron-amplifier power and bandwidth. The

Card 1/2





ACC NR: AM5006614 BOOK EXPLOITATION UR

Khaykov, Aron Zalmanovich

High-power multicavity klystron amplifiers (Moshchnyye usiliteli na mnogorezonatornykh klistronakh) Moscow, Izd-vo "Svyaz'," 1964. 0167 p. illus., biblio. Errata slip inserted. 4,300 copies printed.

TOPIC TAGS: klystron, SHF amplifier, circuit theory, band pass amplifier, amplifier design, resonator, cavity resonator, resonant cavity, amplifying equipment, oscillation

PURPOSE AND COVERAGE: This book is intended for scientific workers and engineers concerned with superhigh frequencies, and for students in universities specializing in this subject. It aims to present the basic problems associated with the general theory of floating-drift klystrons operating as high-power amplifiers of superhigh frequency oscillations. The text contains material on the theory of multicavity klystron amplifiers, on the analysis and synthesis of klystron amplifier circuits, on the energy dependence in klystrons during wideband tuning, and on the relationship between efficiency, power, and pass band of an amplifier. It also includes material on the construction of amplifiers with Chebyshev-type frequency characteristics, of the maximally-flat type or with linear phase characteristics. The author thanks Prof. G.A. Zeytlenk, Prof. N.S. Beschastnyy, and Docent I.N. Fomichev for their valuable advice concerning the solution of the mathematical problems; Prof. S.A. Zusmanovskiy, on whose advice a

Card 1/2 UDC: 621.385.624(022)

number of problems were examined; E.S. Zabalkanskiy for his great help in preparing the manuscript; T.L. Tarasova and A.V. Chalikov for carrying out the calculations on the "Minsk-1" computer; and V.I. Solov'yev for processing the calculation results.

TABLE OF CONTENTS [abridged]:

SUB CODE: 09/ SUBM DATE: 07Oct64/ ORIG REF: 009/ OTH REF: 052

ACC NR: AP6033676 SOURCE CODE: UR/0108/66/021/010/0037/0044

AUTHOR: Khaykov, A. Z. (Active member)

ORG: Scientific Technical Society of Radio Technology and Communications im. A. S. Popov (Nauchno-tekhnicheskoye obshchestvo radiotekhniki i elektrosvyazi)

TITLE: Energy relationships in a klystron amplifier with extended interaction in the output circuit

SOURCE: Radiotekhnika, v. 21, no. 10, 1966, 37-44

TOPIC TAGS: klystron, electronic amplifier, electron beam

ABSTRACT: Large signal operation of a two-cavity extended interaction klystron is studied in order to determine the conditions for maximum operational efficiency. The klystron efficiency is determined by analyzing motion equations for electrons in the gaps of the two cavities at the klystron output. The use of extended interaction in the klystron output circuit gives a maximum klystron efficiency of 66.5% at a phase shift of 120° between potentials of the first and second resonators. This is a 24% increase in efficiency over that for a single-interaction klystron. Maximum efficiency is obtained for a minimum value (120°) of the electron beam angle in the space between the centers of the two gaps. The value of the maximum efficiency decreases as the distance between the gaps is increased. Orig. art. has: 9 figures and 10 formulas.

SUB CODE: 09/ SUBM DATE: 03Jul65/ ORIG REF: 001/ OTH REF: 003

Card 1/1 UDC: 621.385.624

KRISANOV, A.F.; KHAYKOV, L.L.

Redesign of electropneumatic distributers. Metallurg 8 no.8: 32-33 Ag '63. (MIRA 16:10)

1. Nikopol'skiy yuzhnotrubnyy zavod.

KHAYKOV, M., inzh.-podpolkovnik.

Electrolytic capacitors. Voen. sviaz. 16 no.2:38-43 F '58.
(Condensers (Electricity)) (MIRA 11:3)

KHAYKOV, M.A.

137-58-5-9484

Translation from: Referativnyy zhurnal, Metallurgiya, 1958, Nr 5, p 96 (USSR)

AUTHORS: Golubev, T.M., Khaykov, M.A., Sakharov, G.A., Danilov, L.I., Shamets, Ya.V., Korchemnyy, M.I.

TITLE: Reductions and Pressures Employed in Rolling on a Medium-gage Sheet Mill (Rezhim obzhatiy i usiliya pri prokatke na srednelistovom stane)

PERIODICAL: Sb. tr. Kuznetskogo mezhobl. pravl. Nauchno-tekhn. o-va chernoy metallurgii, 1956, Vol 1, pp 79-95

ABSTRACT: The results of an investigation of reduction (RE) schedules on a 2150 2-stand three-high Lauta mill with 850/560/850 mm rolls are presented. Analysis of the temperature of rolling (R) and the pressures and actual RE schedules in the R of 1150-1800 mm wide sheets of St. 3, St. 4, 65G, 1Kh18N9T and SKhL4 steels from slabs 80-220 mm wide established that actual R schedules do not reveal any differentiation in RE with width of sheet as envisaged in the technical instructions. Differentiation of actual RE in accordance with the grades of steel being rolled is observed to be correct. R of sheet of ShKh15 and 65G steels is done in accordance with the technical instructions, while Nrs 3 and 4

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Reductions and Pressures Employed (cont.)

steels are rolled by more intensive and 1Kh18N9T and SKhL steels by less intensive regimes. When billets <20-30 mm thick are being R, it is necessary to maintain uniform RE and therefore to hold the maximum thickness of the work going into the second stand within these limits. It is suggested that analysis of rational RE regimes be performed in accordance with the equation: $\Delta h = 2P_r^2 D \cdot B_0^2 \cdot p^2$, where Δh is the absolute RE, B_0 is the thickness of the sheet in m, D is the mean rolling diameter of the rolls; p is the unit rolling pressure and P_r is the R stress permissible in terms of fatigue strength and housing service life. An example is presented of the calculation of an RE schedule in the R of 1Kh18N9T steel to a 6x1700-mm sheet.

M. Z.

1. Rolling mills--Performance

Card 2/2

VOL'FKOVICH, S.I., akademik; KHAYKOV, V., uchitel'; KOLDASHEV, A.M.

Editor's mail. Khim. v shkole 17 no.2:88-90 Mr-Ap '62. (MIRA 15:3)

1. Lukhovitskaya srednyaya shkola No. 1, Moskovskoy oblasti (for Khaykov).

(Chemistry--Study and teaching)

KHAYKOV, V.S. (g. Lukhovitsy Moskovskoy obl.)

Excercises in the use of chemical apparatus. Khim. v shkole 13 no.6:67-70 N-D '58. (MIRA 11:12)
(Chemistry--Study and teaching)

KHAYKOV, V. S., uchitel'; SOLOVTSOV, A. F., uchitel'; GOLIKOVA, Z. F., dotsent; ALEMAYKINA, M. V., uchitel'nitsa

"Chemistry" by A. D. Smirnov, G. I. Shelinskii. Reviewed by V. S. Khaikov and others. Khim. v shkole 17 no.6:85-91 N-D '62. (MIRA 16:1)

1. Lukhovitskaya srednyaya shkola No. 1, Moskovskaya oblast' (for Khaykov). 2. Srednyaya shkola No. 19, g. Chasov-Yar (for Solovtsov). 3. Mordovskiy universitet (for Golikova). 4. Srednyaya shkola No. 12, g. Saransk (for Alemaykina).

(Chemistry--Textbooks)
(Smirnov, A. D.)
(Shelinskii, G. I.)

KHAYKOV, V.S., uchitel'

"Methods of teaching the chemistry of oxides, bases, acids, and salts" by E.P.Kleshcheva, E.A.Gorshkova, N.I.Puchkova. Reviewed by V.S.Khaikov. Khim. v shkole 15 no.5:90-91 S-O '60.
(MIRA 13:10)

1. Srednyaya shkola No.1, g.Lukhovitsy, Moskovskoy oblasti.
(Chemistry—Study and teaching)

(Kleshcheva, E.P.) (Gorshkova, E.A.) (Puchkova, N.I.)

KHAYKOVICH, I.M.

A dynamic problem for elastic layers immersed in an infinite fluid medium. Uch.zap.Len.un. no.177:194-221 '54. (MLRA 8:4)
(Elasticity)

SOV-46-4-3-9/18

AUTHORS: Khaykovich, I. M. and Khalfin, L. A.

TITLE: On the Effective Dynamical Parameters of Non-Homogeneous Media in the Propagation of Sonic Waves (Ob effektivnykh dinamicheskikh parametrakh neodnorodnykh sred pri rasprostranenii zvukovykh voln)

PERIODICAL: Akusticheskiy Zhurnal, 1958, Vol 4, Nr 3, pp 275-281 (USSR)

ABSTRACT: The propagation of sound in a uniform medium in which small spheres are suspended is investigated. The suspended spheres form a cubic 'lattice'. If the density of the spheres is not too high then such a two-component medium may be treated as a uniform medium having certain effective parameters which depend upon the parameters of the two materials and the geometry of the system. Formulae are derived for the effective velocity of propagation (Eq.22), density (Eq.26) and the specific thermal conductivity (Eq.27). These effective parameters characterise the properties of the medium when it is traversed by plane monochromatic sonic waves. The density and the specific thermal capacity may be complex. The wavelength is assumed to be much greater than the radius of the spheres (outside the spheres). Within the spheres themselves no limitation

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On the Effective Dynamical Parameters of Non-Homogeneous Media in the Propagation of Sonic Waves

is placed upon the wavelength. The parameters of the 2-component medium depend on frequency, while the parameters of the holding medium and of the material of the spheres do not depend upon it. It is shown that if the spheres are sufficiently small, the effective velocity of propagation may be less than the speed of propagation in the holding medium. If the radius of the spheres is sufficiently large the effective velocity of propagation may be greater than in the holding medium. This corresponds to the case where the speed of propagation of waves within the spheres is sufficiently large. For certain relations between the wavelength within the spheres and their dimensions and the corresponding frequencies, the effective velocity may be zero. The absorption in the above medium is due both to

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On the Effective Dynamical Parameters of Non-Homogeneous Media in the Propagation of Sonic Waves

the fact that the velocity of propagation is not real which gives an exponential absorption, and to the presence of reflection which depends on frequency. There is 1 figure, 1 table and 3 references, of which 2 are Soviet.

ASSOCIATION: Vsesoyuznyy n.-i. institut razvedochnoy geofiziki, Leningrad (All-Union Scientific Research Institute of Prospecting Geophysics, Leningrad)

SUBMITTED: January 28, 1957.

1. Sound--Propagation 2. Sound--Mathematical analysis

Card 3/3

Гинзбург, Л.М.

24(6) P 3,4 PHASE I BOOK EXPLOITATION SOV/2250

Akademiya nauk SSSR. Institut fiziki zemli

Nekotoryye voprosy mekhaniki deformiruyemykh sred (Some Problems in the Mechanics of Deformable Media) Moscow, Izd-vo AN SSSR, 1959. 219 p. (Series: Its: Trudy, Nr. 2 (169)) Errata slip inserted. 4,000 copies printed.

Ed.: V.A. Magnitskiy, Doctor of Technical Sciences; Ed. of Publishing House: V.A. Kalinin; Tech. Ed.: Yu. V. Rylina.

PURPOSE: This book is intended for engineers and geophysicists concerned with problems of deformations.

COVERAGE: This collection consists of eight articles on the mechanics of deformations in solid plastic media as applied to the solution of geophysical and engineering problems. No personalities are mentioned. References appear at the end of each article.

TABLE OF CONTENTS:

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Some Problems (Cont.)

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Some Problems (Cont.)

loading, the usual Maxwell's equation is not adequate. Taking into account the additional components of deformation, a new equation embodying the relationship between shear deformation and the velocity of full shear deformation is analyzed.

Gurevich, G.I. Initial Considerations in the Approach to Tectonic Modeling 75

The author deals with considerations in the application of the principle of similitude to the modeling of tectonic and hydrodynamic processes in the solution of geodynamic problems. The following names are mentioned: B.L. Shneyerson, Ye. N. Lyustikh, A.A. Ilyushin, M.V. Gzovskiy.

Khaykovich, I.M. Propagation of Vibrations in a Medium With Relaxation of Stresses 145

The theory of propagation of seismic waves in an ideally elastic medium is not adequate for purposes of interpretation. The present article establishes the quantitative corrections for a half-space subjected to axially symmetric loading. Maxwell's three-dimensional equation is used in finding a solution for corrections. The following names are mentioned: G.I.

Card 3/5

Some Problems (Cont.)

Keylis-Borok, V.I., and V.I. Ul'yanova. Problem of Creep in Hollow Cylinders Under Normal Pressure 211

The author considers the process of residual deformation in a hollow cylinder and takes into account the time changes of stresses and deformations. This problem is of interest in theoretical studies of seismic behavior and also in studies of the relationship between the creep and interior pressure in pipes. The following names are mentioned: A.F. Golovin, L.I. Kachanov, A.A. Abramov, L.G. Shershen', I.K. Snitko.

AVAILABLE: Library of Congress

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Card 5/5

SOV/49-59-4-1/20

AUTHORS: Khaykovich, I. M., Khalfin, L. A.

TITLE: On the Effective Dynamic Parameters of Heterogeneous Elastic Media in which Plane, Longitudinal Waves Propagate (Ob effektivnykh dinamicheskikh parametrakh neodnorodnykh uprugikh sred pri rasprostranenii ploskoy prodol'noy volny)

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 4, pp 505-515 (USSR)

ABSTRACT: The effective parameters discussed by the authors are illustrated in Fig 1, where two components of the homogeneous medium are denoted by 1 and 2 , and s - period of the distribution of the uniform spherical particles which are subjected, to the plane, monochromatic, longitudinal wave φ , propagated from the left-hand side. In these circumstances the wave becomes diffused, the rate of which depends on the coordinate z_0 . It is assumed that the wavelength is greater than the dimension of the spherical particles and that every particle is in the state of a seismic di-polar vibration in the direction of the axis z . Then the wave can be described by the expression (1.1), where (ρ, Ω, z) - polar coordinates, (r, ϑ, Ω) - spherical coordinates, b_1 - velocity of transverse waves, a_1 - velocity of the

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On the Effective Dynamic Parameters of Heterogeneous Elastic Media in which Plane, Longitudinal Waves Propagate

longitudinal waves, u - dislocation field expressed as Eq (1.2). The longitudinal and transverse potentials φ and ψ inside the sphere can be expressed as Eqs (1.3) and (1.4), respectively. Thus the problem of diffusion of the longitudinal wave caused by the seismic di-poles can be solved when the constants A , B , A' and B' for the limiting conditions Eqs (1.5) and (1.6) are determined. This can be performed as shown in Eqs (1.7) and (1.15). In order to obtain the integral of the longitudinal potential of the total dislocation, the value of u_o for the point (x_o , y_o , z_o) is calculated from Eq (2.1) and the relation $u_o = \partial_\varphi / \partial z_o$ is defined as Eq (2.2). From this expression the integral equation for the potential φ is derived as Eq (2.3) which can be written in the form Eq (2.6). The latter is solved by Eqs(2.8) and (2.9). By substituting Eq (2.9) into (2.8), the velocity of propagation of the longitudinal wave a in the 2-component

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On the Effective Dynamic Parameters of Heterogeneous Elastic Media in which Plane, Longitudinal Waves Propagate

medium is obtained as Eqs (2.10) and (2.11). In order to determine the effective parameters the reflected wave should be derived from the second and third terms of the equation (2.6) for negative values of z_o . When Eq (2.9) is substituted into these terms, the Eqs (2.14) and (2.15) are obtained, which gives an accuracy of the order: $u^2|k/a\ R|$ and $v^2|k/a\ R|$ for a/a1 and D expressed by Eqs (2.11) and (2.13). If f is sufficiently small and P , Q_1 , Q_2 , M are limited, then the effective parameters can be found from Eq (2.16). Thus the coefficient of the reflection for the plane, longitudinal wave φ at the boundary of two media can be defined as Eqs (3.1) and (3.2) and the ratio a/a_1 as Eq (3.3). By equalising the equations (3.2) and (3.1) with application of the equation (3.3), a system of two equations is obtained, from which the effective dynamic parameters (the effective velocity of the longitudinal wave and the effective density of the 2-component medium) are obtained as Eqs (3.4) and (3.5). These parameters may have complex meanings but the latter, in the case of homogeneous elastic media,

On the Effective Dynamic Parameters of Heterogeneous Elastic Media in which Plane, Longitudinal Waves Propagate

are insignificant. Thanks are given to Professor G. I. Petrashen. There is 1 figure and there are 4 references, of which 3 are Soviet and 1 English.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut razvedochnoy geofiziki (All-Union Scientific Research Institute of Survey Geophysics)

SUBMITTED: February 27, 1957.

SOV/49-59-6-3/21

AUTHORS: Khaykovich, I. M., Khalfin, L. A.

TITLE: On the Effective Dynamic Parameters of an Elastic Medium in the Propagation of a Plane, Transverse, Polarized Wave.

PERIODICAL: Izvestiya Akademii nauk SSSR, Seriya geofizicheskaya, 1959, Nr 6, pp 815-826 (USSR)

ABSTRACT: This work is a continuation of a similar one on the propagation of seismic waves published in this journal, 1959, Nr 4, where the basic theoretical calculations were described (Fig 1). The polarized wave is determined in the present work by the potential, Eq (1.1), where b_1 - velocity of the transverse wave, j - ort in the direction of the axis y. The following assumptions are made: (1) The wavelength is much greater than the diameter of the sphere and (2) the field, diffused by the sphere, is described by the longitudinal φ and the transverse ψ potentials, Eq (1.4). The potentials inside the sphere are as shown by Eq (1.6). Thus the problem of diffusion is confined to the determination of the constants A, B, A', B' (Eqs 1.7 to 1.23). The formula expressing the field of diffusion is defined in its final form as Eq (1.24). The method of determining the effective dynamic parameters is

Card 1/3 based on the integral equation of the transverse potential

On the Effective Dynamic Parameters of an Elastic Medium in the Propagation of a Plane, Transverse, Polarized Wave

of the total field displacement, the solution of which can be written as a potential of the plane, transverse, polarized wave. The total displacement u_x at the point (x_o, y_o, z_o) consists of the displacement of the wave, Eq (2.1) and the displacement caused by the diffusion due to all spheres. This total displacement in the direction of the axis z depends on the coordinate z_o and is related to the potential ψ as shown in Eq (2.2). The displacement along the axis x is defined by Eq (2.3). Thus the expression (2.4) is obtained, which can be written as Eq (2.5). The latter can be shown in the simplified form Eqs (2.7) and (2.8), when the assumption, Eq (2.6) is made. Now it is possible to determine ψ as it is shown in Eqs (2.9) to (2.17). The condition (2.18) can be defined

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On the Effective Dynamic Parameters of an Elastic Medium in the Propagation of a Plane, Transverse, Polarized Wave

in two ways: from the effective wave velocity or from the effective density of the medium, the determination of which is shown in Eqs (3.1) to (3.7). Thanks are given to G. I. Petrashen' for taking part in the solution of the problems described in the article. There is 1 figure and there are 2 Soviet references.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut razvedochnoy geofiziki (All-Union Scientific Research Institute of Geophysical Prospecting)

SUBMITTED: April 22, 1957.

22587
S/044/60/000/010/010/021
C111/C333

9.9865
3.9300 (1014,1109)

AUTHOR: Khaykovich, I.M.

TITLE: Some problems of wave propagation in a medium with stress relaxation

PERIODICAL: Referativnyy zhurnal, Matematika, no. 10, 1960, 96, abstract 11685. (In sb.: Vopr.dinamich.teorii rasprostr. seysmich.voln. Z.L.,Leningr.un-t, 1959, 320-337)

TEXT: The author considers the propagation of waves in a medium which generalizes the model of the ideal elastic medium inasmuch as the regrouping of the material points leading to the relaxation of the stresses and of the permanent deformations is taken into consideration. The small deformations ε_x, ε_{xy},... of the medium are connected with the elastic deformations e_x,e_{xy},... by the formulas: $\partial\varepsilon_x/\partial t = \partial e_x/\partial t + (e_x - \frac{1}{3}\theta)/T$; $\partial\varepsilon_{xy}/\partial t = \partial e_{xy}/\partial t + e_{xy}/T$, where $\theta = \varepsilon_x+\varepsilon_y+\varepsilon_z = e_x+e_y+e_z$, T the time of relaxation, the magnitudes e_x,e_{xy},... are connected with the stresses by the Hooke law. For $T\to\infty$ the transition to the ideal elastic medium takes place, for $T\to 0$ to

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Some problems of wave propagation... S/044/60/000/010/010 021
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the Pascal fluid. The author considers for large T-values for a homogeneous and isotropic medium instationary problems of the propagation of plane waves in an infinite medium, furthermore Lamb boundary value problems for the half space and elastic layer on a relaxing half space. The absorption and dispersion of the waves in the problems considered is investigated.

[Abstracter's note: Complete translation.]

Card 2/2

KHAYKOVICH, I. M.

Cand Phys-Math Sci - (diss) "Propagation of vibrations in dispersifying medium." Leningrad, 1961. 9 pp; (Leningrad Order of Lenin State Univ imeni A. A. Zhdanov); 180 copies; free; (KL, 10-61 sup, 205)

S/169/62/000/009/058/120
D228/D307

AUTHORS: Grammakov, A. G., Gelobovskaya, V. S. and Khaykovich, I. M.

TITLE: Some problems of the theory of the helium method

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 9, 1962, 42-43, abstract 9A281 (In collection: Vopr. rudn. geofiz., no. 3, M., Gosgeoltekhizdat, 1961, 3-21)

TEXT: The basic theoretical principles of the helium method of seeking uranium deposits are given. The method is based on the fact that much of the He^4 is a radioactive decay product of elements of the uranium and thorium series. Part of the helium escapes in consequence of the crystal lattice being disturbed. The migration of escaping helium is considered on the basis of the diffusion theory; this allows use to be made of the developed theory of gas surveying and takes into account that helium is formed continuously in rocks through which it diffuses. The following points are considered: the stationary distribution of gas in rock; and the

Card 1/2

Some problems of...

possible helium concentration over uranium orebodies, in the form of endless beds with a uniformly distributed concentration, and over globularly and cylindrically shaped bodies. The question of establishing the stationary state and of estimated a deposit's age is studied. The results of calculating the distribution of helium on models and contrivances are given; they can be used to determine the coefficients of diffusion of gases under field and laboratory conditions. It is concluded that the helium method can be expediently used in areas where rocks have low diffusion factors ($\sim 10^{-5}$ cm/sec^2). The question is raised about the creation of accurate and highly sensitive equipment and about the method's further development. [Abstracter's note: Complete translation.]

Card 2/2

KHAYKOVICH, I.M.

Distribution of radon in an ore stratum traversed by a cylindrical hole. Vop.rud.geof. no.2:94-101 '61. (MIRA 15:4)
(Logging (Geology)) (Radon)

KHAYKOVICH, I.M.; KHALFIN, L.A.

Change in the intensity of the gamma radiation from a semispace covered with a layer which is impermeable to gas. Vop.rud.geof. no.2:131-134 '61. (MIRA 15:4)
(Gamma rays) (Radioactive prospecting)

GRAMYAKOV, A.G.; GLEBOVSKAYA, V.S.; KHAYKOVICH, I.M.

Theory of the helium method. Vop.rud.geofiz. no.3:3-21 '61.
(MIRA 15:8)

(Radioactive prospecting)

OVCHINNIKOV, A.K.; IVASHCHENKO, T.F.; KHAYKOVICH, I.M.; ZOLOTNITSKIY, V.A.; ALIMOCHKIN, V.K.; ALEKSEYEV, V.V., otv. red.; BORUSHKO, T.I., red. izd-va; BYKOVA, V.V., tekhn. red.

[Instructions on gamma logging in prospecting for uranium deposits] Instruktsiia po gamma-karotazhu pri poiskakh i razvedke uranovykh mestorozhdenii. Moskva, Gosgeoltekhizdat, 1963. 133 p. (MIRA 16:8)

1. Russia (1923- U.S.S.R.) Gosudarstvennyy geologicheskiy komitet.
(Uranium ores) (Radioactive prospecting)

BONDAREV, V.M.; GUBANOV, V.G.; KOROVIN, P.K.; OVCHINNIKOV, A.K.; KHAYKOVICH, I.M.; NIKONOVA, A.I., red.

[Gamma-sampling of uranium ores in their natural occurrence] Gamma-oprobovanie uranovykh rud v estestvennom zaleganii. Moskva, Izd-vo "Nedra," 1964. 204 p. (MIRA 17:7)

KOLESOV, V.M.; OVCHINNIKOV, A.K.; KHAYKOVICH, I.M.

Influence of uranium ore composition on the intensity of gamma radiation. Vop.rud.geofiz. no.4:58-66 '64. (MIRA 18:1)

KHAYKOVICH, I.M.

Considering the diameter of a well in the quantitative interpretation of the results of gamma logging. Vop.rud.geofiz. no.4:20-33 '64. (MIRA 18:1)

GRAMMAKOV, A.G.; GLEBOVSKAYA, V.S.; KHAYKOVICH, I.M.

Helium method of prospecting for the deposits of radioactive elements. Vop. rud. geofiz. no.5:3-19 '65. (MIRA 18:9)

KHAYLENKO, L.V.

Kinetics of the development of the shear deformation in glycerol and in a solution of rosin in transformer oil. L. A. Dumanskiĭ and L. V. Khaĭlenko (Inst. Gen. and Inorg. Chem., Acad. Sci. Ukr. S.S.R., Kiev). *Kolloid. Zhur.* 15, 426–8(1953).—If the annulus between 2 coaxial cylinders is filled with 100% glycerol (I) and a const. torque P is applied to the inner cylinder, this cylinder rotates first (e.g., for 100 sec.) more rapidly than later (e.g., after 1000 sec.); thus, I does not show the Newtonian behavior. This effect occurs at 17° (i.e. near the m.p. of I) and very small P (10^{-4} to 3×10^{-3} dynes/sq. cm.). A 42% soln. of rosin in transformer oil, which is as viscous as I, does not show the effect.

J. J. Bikerman

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KHAYLENKO, L.V.

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2

Investigation of the process of structure formation in solutions by studying their elasticity and viscosity. T. A. Tumanskii, A. L. Tumanskii, and L. V. Khaylenko. *Doklady Akad. Nauk S.S.S.R.* 92, 1189–91(1953).—Information rates and deformation relaxation after removal of stress were studied on liquid colloids at stresses of 0.01–0.15 dynes/sq. cm. by the method of Sivedov (*J. phys.* 8, 341 (1889)). Below 0.25% gelatin in H_2O at 17°, regardless of aging, no elasticity was observed; aged solns. of higher concn. exhibited elasticity at lower stresses, and plastic [illegible] if the stress exceeds [illegible]. Behavior of latex agreed with findings of other authors. Aged up to 450 hrs. 2.5% solns. of cellulose xanthogenate produced nonlinear deformation vs. stress curves, but in most cases showed no relaxation after stress removal. High-purity glycerol at stresses of 0.15–5.47 dynes/sq. cm. exhibited definite elasticity and relaxation phenomena, and rheograms similar to those of latex solns. were produced; this is taken as an indication of cross-linking through H bonds in glycerol. Addn. of 8% H_2O to glycerol enhanced the effect. Soln. of rosin in transformer (mineral) oil behaved as a Newtonian liquid. Andrew Dravnieks

PA 1

DUMANSKIY, I.A.; KHAYLENKO, L.V.

Comparative study of elastic and viscous properties of viscose in the process of its ripening. Koll.zhur.17 no.6:424-427 N-D '55. (MLRA 9:4)

1.Institut obshchey i neorganicheskoy khimii AN USSR i Laboratoriya kolloidnoy khimii, Kiyev.
(Viscose)

KHAYLENKO, L. V. Cand Chem Sci -- (diss) "A Comparative Study of the Springy and Elastic Properties of Aqueous Solutions of Glycerine, Saccharose, and Xylite." Kiev, 1957. 15 pp with graphs, 21 cm. (Academy of Sciences, Ukrainian SSR, Inst of General and Inorganic Chemistry), 100 copies (KL, 19-57, 86)

KHAYLENKO, L. V.

AUTHOR: Khaylenko, L. V. 20-6-23/48

TITLE: An Investigation of the Kinetics of Shearing Deformation Developments in Aqueous Solutions of Glycerin, Sucrose and Xylitol (Issledovaniye kinetiki razvitiya deformatsii sdviga v vodnykh rastvorakh glitserina, sakharozy i ksilita).

PERIODICAL: Doklady AN SSSR, 1957, Vol. 115, Nr 6, pp. 1135-1137 (USSR.).

ABSTRACT: In 1953 the author proved that the flow curves $\Sigma = \varphi(\tau, P)$ of glycerin in aqueous solutions do not correspond to the Newtonian liquid, but that they are analogous to the rheograms of the solutions of high-molecular compounds. The presence of an elastic-viscous section on the flow curve of glycerin was confirmed in 1955 by Korotkova and Sandomirskiy. In connection with the surprising results it was interesting to study the rheological properties of glycerin and its aqueous solutions in the widest possible range of concentrations, and also to study the aqueous solutions of hydroxyl-containing compounds. The substances mentioned in the title were selected for this purpose. The experiment showed that pure dry glycerin in a given system of deformation behaves like a true Newtonian liquid. The rheogram in graphic representations manifest themselves as straight lines without regression after the load is taken away. Water-dilutions suddenly change the elastic-viscous pro-

Card 1/4

perties, already at 95%. In further dilutions the elastic-viscous constants increase and reach their maximum at 70%. Figure 2 gives the curves $\Sigma = \varphi(\tau, P)$ for an 80%-solution which are typical for the range of concentrations investigated. The equilibrium modulus $E = \frac{P}{\Sigma_m}$, calculated from the corresponding curves, is modified with the concentration of the solution in the following manner:

concentration %	80	70	60
E, dyn/cm²	0,3	300,0	80,0

The sucrose rheograms were measured from a 50%-solution, at deformation stresses of P = 0,0002 to P = 0,002 dyn/cm² (figure 3). The curves of the dependence of the shearing deformation on the duration of deformation (figure 3) show that the above-mentioned solution possesses an elasticity which is proper to the solutions of high-molecular compounds and which was discovered by the author in the system glycerin-water. When the solution is heated to 100% the continuous structural network, to which the elastic-viscous properties of the system are due, is detroyed, with a subsequent cooling of the solution to 20°C. Analogous curves were obtained for xylitol. From this follows that:

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An Investigation of the Kinetics of Shearing Deformation [illegible]
Solutions of Glycerin, Sucrose and Xylitol.

ASSOCIATION: Institute for General and Anorganic Chemistry AN Ukrainian SSR (Institut obshchey i neorganicheskoy khimii Akademii nauk USSR.).

PRESENTED: By P. A. Rebinder, Academician, March 28, 1957

SUBMITTED: January 14, 1957.

AVAILABLE: Library of Congress.

Card 4/4

DUMANSKIY, I.A.; KHAYLENKO, L.V.

Rheological properties of glycerin solutions. Koll.zhur. 22 no.3:277-281 My-Je '60. (MIRA 13:7)

1. Institut obshchey i neorganicheskoy khimii AN USSR, Kiyev.
(Glycerin)

DUMANSKIY, I.A.; KHAYLENKO, L.V.

Rheological properties of glycerol aqueous solutions. Koll.zhur. 23 no.6:684-686 N-D '61. (MIRA 14:12)

1. Institut obshchey i neorganicheskoy khimii AN USSR i Laboratoriya kolloidnoy khimii, Kiyev.

(Glycerol) (Rheology)

DUMANSKIY, I.A.; KHAYLENKO, L.V.; PROKOPENKO, L.V.

Viscosity of molten capron. Koll.zhur. 25 no.6:646-648 N-D '63.
(MIRA 17:1)

1. Institut khimii polimerov i monomerov, Kiyev.

YEGOROV, M.Ye.; KHAYLIS, G.A.

Results of testing Czechoslovak flax harvesting machines.
Sel'khozmashina no.2:28-31 F '56. (MLRA 9:5)
(Chechoslovakia--Harvesting machinery) (Flax--Harvesting)

SOV/124-58-3-2641

Translation from: Referativnyy zhurnal, Mekhanika, 1958, Nr 3, p 15 (USSR)

AUTHOR: Khaylis, G. A.

TITLE: Some Questions of the Statics and Dynamics of the Rolling of a Wheel With Slippage (Nekotoryye voprosy statiki i dinamiki kacheniya kolesa so skol'zheniyem)

PERIODICAL: Sb. trudov po zemledel'cheskoy mekhanike. Moscow, Sel'khozgiz, 1956, vol 3, pp 460-476

ABSTRACT: Equations are written for the motion of a driven wheel, taking into account slippage and soil resistance. In the case of the uniform motion of a wheel, the author determines (approximately) the relationship between the coefficient of slippage and the factors bearing an influence upon such slippage. Typographical errors are noted.

Ye. N. Berezkin

Card 1/1

KHAYLIS, G.A., inzh.

Results of testing a flax puller including a binder. Sel'khozmashina no.9:17-20 S '57. (MLRA 10:9)
(Flax--Harvesting) (Harvesting machinery)

KHAYLIS, O.A., inzh.

Results of testing the Belgian flax threshing machine "Deman."
Sol'khozmashina no.12:25-27 D '57. (MIRA 11:2)
(Belgium--Threshing machines)

KHAYLIS, G.A., inzh.

Performance of sheaf binding and dividing attachments of flax pullers. Trakt.i sel'khozmash. no.1:19-22 Ja '60. (MIRA 13:4)

(Flax--Harvesting)

KHAYLIS, G.A., kand.tekhn.nauk

Longitudinal copying of the relief of the ground by a flax pulling machine. Mekh. i elek. sots. sel'khoz. 20 no.3:43-44 '62. (MIRA 15:7)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut L'na.
(Flax)
(Agricultural machinery)

BOLOTOV, I.N.; KOZYREVA, A.A.; KONDRASHUK, P.K.; KRYLOV, A.A.; TOLKOVSKIY, V.A.; KHAYLIS, G.A.; Prinimal uchastiye LEBEDEV, Ya.A.; GOLOMYSOV, F.S., red.; BARANOVA, L.G., tekhn. red.; FRIDMAN, Z.L., tekhn. red.

[Over-all mechanization of flax growing]Kompleksnaia mekhanizatsiia l'novodstva. [By] I.N.Bolotov i dr. Leningrad, Sel'khozizdat, 1962. 354 p. (MIRA 16:2)
(Flax processing machinery)

KHAYLIS, G.A., kand. tekhn. nauk; KLYATIS, L.M., inzh.

Some theoretical problems concerning flax gatherers. Mekh. i elek. sots. sel'khoz. 21 no.3:52-54 '63. (MIRA 16:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut l'na (for Khaylis). 2. Kalininskaya mashinoispytatel'naya stantsiya (for Klyatis).

(Flax—Harvesting)

KOLESNIKOVA, L.I.; MASTYUKOVA, Yu.N.; KHOLCHEV, N.V.; KOZACHENKO, N.F.; PETROVA, Ye.T.; KHAYLO, G.V.

Results of hyperimmunization of animals with measles virus. Vop. virus. 10 no.1:87-90 Ja-F '65. (MIRA 18:5)

1. Moskovskiy nauchno-issledovatel'skiy institut epidemiologii i mikrobiologii.

KHAYLO, V.S.; ESKIN, I.L.; KLEYNERMAN, Z.I.; RAZUMOVSKIY, N.N., red.

[Mechanization of intrafactory transportation] Mekhanizatsiia vnutrifabrichnogo transporta. Moskva, TSentr. tekhn. kursy povysheniia kvalifikatsii ITR i tekhn. obucheniia rabochikh. No.2.[Overhead intrafactory conveying] Podvesnoi vnutrifabrichnyi transport; konspekt lektsii, 1963. 76 p.6 (MIRA 17:1)

L 44683-66 EWT(1)/T-2 WW

ACC NR: AP6005390 (N) SOURCE CODE: UR/0413/66/000/001/0140/0141

AUTHOR: Khaylo, N. I.

ORG: none

30 B

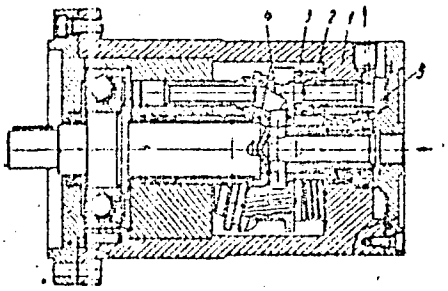
TITLE: Axial-plunger pump. Class 59, No. 177775

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 1, 1966, 140-141

TOPIC TAGS: pump, water pump, hydraulic equipment, hydraulic device, hydraulic pump

ABSTRACT: This Author Certificate presents an axial-plunger pump (hydraulic engine) with a block of cylinders fixed immovably in its body (see Fig. 1).

Fig. 1. 1 - pump body; 2 - nipple; 3 - shoes; 4 - distributing disk; 5 - collector



Card 1/2 UDC: 621.655.002.54

KHAYLOV, A. I.

37410. Posev Espartseta Pod Pokrov Ozimykh Osen'yu. V Sb: Za Vysokuyu Kul'turu Zemledeliya. Kursk, 1949, s. 70-74.

SO: Letopis' Zhurnal'nykh Statey, Vol. 7, 1949

KANAVETS, P.I.; GESS, B.A.; SPORIUS, A.E.; CHERNYSHEV, A.M.; MELENT'YEV, P.N.; CHERNYKH, V.I.; KHROMYAK, R.P.; KHAYLOV, B.S.; BORISOV, Yu.I.; TSYLEV, L.M.; SOKOLOV, V.S.; Prinimali uchastiye: MARKIN, A.A.; GORLOV, M.Ya.; VORONOV, Yu.G.; BULAKHOV, K.A.; KREMYANSKIY, V.L.; ARSHINOV, G.P.; MAZUN, A.E.; PISARNITSKIY, I.M.; BOKUCHAVA, O.A.; KIRILLOV, M.V.; TSELUYKO, P.I.; POLYAKOV, G.O.; REZKOV, A.S.; ZHUCHKOV, M.I.; ROMASHKIN, A.S.; ZUBKOV, A.S.; KOZLOV, N.N.

Pilot plant for the nodulizing of finely ground charge mixtures by the method of chemical catalysis. Trudy IGI 22: 93-109 '63. (MIRA 16:11)

GESS, B.A.; CHERNYSHEV, A.M.; KANAVETS, P.I.; MELENT'YEV, P.N.; KHROMYAK, R.P.; VORONOV, Yu.G.; TSYLEV, L.M.; CHERNYKH, V.I.; BORISOV, Yu.I.; SPORIUS, A.E.; Prinimali uchastiye: TOLEROV, D.D.; MINKIN, V.M.; MARKIN, A.A.; GORLOV, M.Ya.; KHAYLOV, B.S.

Experimental blast furnace smelting with replacement in the charge of 20-per cent of the fluxed sinter by granules prepared by chemical catalysis. Trudy IGI 22:110-113 '63. (MIRA 16:11)

KANAVETS, P.I.; GESS, B.A.; SPORIUS, A.E.; MELENT'YEV, P.N.; CHERNYSHEV, A.M.; CHERNYKH, V.I.; KHAYLOV, B.S.; BORISOV, Yu.I.

Experimental pilot plant stand for the nodulizing of finely ground materials by the method of chemical catalysis. Trudy IGI 22:57-69 '63. (MIRA 16:11)

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S/658/62/000/009/010/013
A059/A126

16.6100

AUTHORS: Nechepurenko, M.I., Candidate of Physical and Mathematical Sciences
Khaylov, I.K.

TITLE: One service problem

SOURCE: Moscow. Fiziko-tekhnicheskiy institut. Trudy. no. 9, 1962. Issledovaniya po mekhanike i prikladnoy matematike. 105 - 110

TEXT: The problem of the speed of service rendered to subscribers on demand without delay has been formulated. Two methods of servicing are examined. The first is the so-called successive questioning method Q_1, in which the service pulses are considered to pass channels, the pulses in the k-th channel being intended for subscriber A_k (which has the questioning period T_k) and succeeding one another with the period $N\tau$ and the phase $(k-1)\tau$, $(k = 1, 2, \ldots, N)$. The second is the so-called direct-preference questioning method Q_2, which assumes that $T_1 \leq T_2 \leq \ldots \leq T_N$. Each service serves, in the presence of the subscribers $A_{l_1}, A_{l_2}, \ldots, A_{l_m}$ not yet manipulated, the subscriber A_{l_s} with minimum l_s, namely $l_s \leq l_t$ $(t = 1, 2, \ldots, m)$. Although Q_2 has been hith-

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S/658/62/000/003/010/013
A059/A126

One service problem

erto considered to yield $\tau_{max}(T_n)$, it is shown that this contention is basically wrong. An example is given in which $\tau_{max}(Q_2, T_n) < \tau^*(T_n)$. Since in each case $\tau_{max}(Q_1, T_n) \leq \tau_{max}(Q_2, T_n)$, and, for the case of considerable frequency dispersion, $\tau_{max}(Q_1, T_n) < \tau_{max}(Q_2, T_n)$, the chief aim of this paper is to find the lower estimate of $\tau_{max}(Q_2, T_n)$, which is

$$T_1 \psi\left(\frac{T_2}{T_1} \psi\left(\frac{T_3}{T_2} \cdots \psi\left(\frac{T_N}{T_{N-1}}\right)\cdots\right)\right) \leq \tau_{max}(Q_2, T_n). \quad (18)$$

Card 2/2

ACC NR: AP6034720 (N) SOURCE CODE: UR/0025/66/000/008/0080/0083

AUTHOR: Khaylov, K. (Candidate of biological sciences)

ORG: none

TITLE: Biochemistry of the sea

SOURCE: Nauka i zhizn', no. 8, 1966, 80-83

TOPIC TAGS: biochemistry, sea water, biology

ABSTRACT: The author discusses biochemistry of the sea or the exchange of organic matter via the water medium. Experiments have shown that the properties of sea water are determined by organisms which had previously inhabited it and which, particularly the lower ones, (bacteria, seaweed, invertebrates) discharge various organic matter into the water. The author explains the science of biocenology and the complexity of biochemical relations, an example of which is illustrated in a figure in the original article. Biocenosis is one of the most important regulators of mechanisms in the sea. Mention is also made of a phenomena called "flowering of the sea" caused by sudden periodic increases in the number of

Card 1/2

single cell seaweeds. The proximity of marine biochemistry to the science of cybernetics is pointed out in conclusion. Orig. art. has: 1 figure. [GC]

SUB CODE: 06, 08/SUBM DATE: none/

Card 2/2

KHAYLOV, K.M.

Organic secretions of sea macrophytes as a factor influencing the internal medium of offshore communities. Trudy SRS 16:496-505 '63. (MIRA 17:6)

KHAYLOV K. M.

Chemical Abstracts
Vol. 48 No. 5
Mar. 10, 1954
Soils and Fertilizers

The decomposition of crop residues from perennial grasses and the influence of nitrogen fertilizers on the yield of spring wheat in relation to the time of plowing under the sod. V. V. Gulyakin, P. M. Smirnov, K. M. Khailov, V. I. Kurdenok, and V. F. Kurochkina. *Izvest. Timiryazev. Sel'skokhoz. Akad.* No. 2(3), 41-58(1953).—It is shown that plowing under a sod crop in the early fall supplies more available N than plowing it under in late fall. In the latter case the N becomes assocd. with complex unhydrolyzable forms. Data are presented showing the increase in yield of spring wheat. I. S. Joffe

KHAYLOV, K.M.; DURLAKOVA, Z.P.

Possibilities of using gel filtration in chemical oceanography. Okeanologiia 5 no.4:739-748 '65. (MIRA 18:9)

1. Institut biologii yuzhnykh morey AN UkrSSR, Sevastopol'.

KHAMOV, K. M.

KHAMOV, K. M.: "The problem of using the fertility of the market of perennial grasses when cultivated at various intervals." Moscow Order of Lenin Agricultural Academy imeni K. A. Timiryazev. Moscow, 1956. (Dissertations for the Degree of Candidate in Agricultural Sciences).

SO: Knizhnaya letopis' No. 22, 1956

KHAYLOV, K.M.

Using phenol extraction in studying organic complexes of sea water.
Okeanologiia 2 no.5:835-844 '62. (MIRA 15:11)
(Sea water--Analysis) (Phenols)

KHAYLOV, K.M.

Electrophoretic investigation of blood plasma proteins in codfish. Trudy MMBI no.4:202-207 '62. (MIRA 15:11)

1. Laboratoriya gidrobiologii (zav. - M.M. Kamshilov) Murmanskogo morskogo biologicheskogo instituta.
(Paper electrophoresis)
(Codfish) (Blood proteins)

KHAYLOV, K.M.

Some unknown organic substances in seawater. Dokl. AN SSSR 147 no.5:1200-1203 D '62. (MIRA 16:2)

1. Murmanskiy morskoy biologicheskiy institut im S.M. Kirova Kol'skogo filiala AN SSSR. Predstavleno akademikom Ye.N. Pavlovskim.

(Seawater—Composition)

KHAYLOV, K.M.

Some unknown organic substances in seawater. Dokl. AN SSSR 147 no.5:1200-1203 D '62. (MIRA 16:2)

1. Murmanskiy morskoy biologicheskiy institut im. S.M. Kirova Kol'skogo filiala AN SSSR. Predstavleno akademikom Ye.N. Pavlovskim.

(Seawater—Composition)

KHAYLOV, K.M.; LANSKAYA, L.A.

Some factors of the chemical action of Cystoseira on uncellular algae. Trudy SES 17:351-360 '64. (MIRA 18:6)

KHAYLOV, K.M.

Chemical effect of marine macrophytes on the aquatic medium. Bot. zhur. 49 no.3:338-347 Mr '64.
(MIRA 17:3)

1. Institut biologii yuzhnykh morey AN UkrSSR, Sevastopol'.

KHAYLOV, K.M.

Problem of systemic organization in theoretical biology.
Zhur. ob. biol. 24 no.5:324-333 S-O '63.
(MIRA 17:1)

1. Murmanskiy morskoy biologicheskiy institut AN SSSR.

KHAYLOV, K.M.

New aspects of the research on organic substances in seawater. Trudy MMBI no.5:41-48 '64.

Intravitam excretion of organic substances by marine macrophytes and ecologic conditions of the coastal zone. Ibid.:49-56

Effect of foreign deoxyribonucleic acid on the protein composition of blood serum in codfishes. Ibid.:181-185 (MIRA 17:4)

1. Laboratoriya biokhimii Murmanskogo morskogo biologicheskogo instituta.

KHAYLOV, K.M.

Prospects of dynamic biochemistry of the sea. Okeanologiia 5 no.1:3-13 '65. (MIRA 18:4)

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Formation of organometallic complexes under the participation of external metabolites of sea algae. Dokl. AN SSSR 155 no. 4: 933-936 Ap '64. (MIRA 17:5)

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B. T. R.
Vol. 3 No. 4
Apr. 1954
Heat Power

5683* Calculation of the Working Stroke of a Two-Cycle Engine. (Russian.) M. A. Khailov. *Vestnik Mashinostroeniia*, v. 33, no. 9, Sept. 1953, p. 5-15.
Detailed mathematical presentation. Graphs, diagrams.

6/8/54 cM

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Two-cycle cam-valve engine. Nauch.dokl.vys.shkoly; mash. i prib. no.1:31-41 '59. (MIRA 12:8)
(Gas and oil engines)

SOV/122-59-6-1/27

AUTHORS: Khaylov, M.A., Doctor of Technical Sciences, Professor, Shal'nov, V.I. and Mogilevskiy, Ye.Z., Engineers

TITLE: Investigation of the Operation of a Two-stroke Engine with Disc-type Valve Gear

PERIODICAL: Vestnik mashinostroyeniya, 1959, Nr 6, pp 3 - 8 (USSR)

ABSTRACT: A two-stroke engine with gas-distribution control by one inlet and one exhaust disc based on a patent due to V.I. Shal'nov (Author's Certificate Nr 8243) is stated to yield a relatively large power output per unit of swept volume. A single cylinder test engine with a bore of 148 mm, a stroke of 144 mm (2.48 litres) and a nominal compression ratio of 5.56 illustrated in cross-section (Figure 1) and described was built and tested. The distributor discs are placed in the cylinder head horizontally (inlet) and alongside the cylinder (exhaust) at a small angle to the vertical so that the inlet is vertical against the piston face and the exhaust nearly horizontal, at a small angle to the piston face. Both discs have similar profiled openings and are rotated by pinions engaging with their toothed rims. The discs are sealed by face seals on the side facing the cylinder

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Investigation of the Operation of a Two-stroke Engine with Disc-type Valve Gear

against sealing rings which, in turn, are sealed by piston-ring type seals against the cylindrical recess in which they are housed. The absence of scavenge ports reduces the overall length of the cylinder. The optimum fuel injection and ignition crank angles were found by test, at 1 600 r.p.m. and 980 mm mercury column scavenging pressure, to be 160° ahead of the t.d.c. and 35° ahead of the t.d.c., respectively. 12 variants for locating the injection nozzle and sparking plug in the combustion chamber were tested, all yielding satisfactory operation without decisive advantage over one another. Tests with different gas distribution phasing showed the best angle for exhaust opening to be 95° after the t.d.c. and closing 239° after the t.d.c. The inlet opening at 121° after the t.d.c. and closing up at 265° after the t.d.c. were found best. Varying the phasing produces output power differences of up to 15%. Power and fuel consumption curves were plotted against

the excess air coefficient at different scavenge pressures, showing a large increase of power with scavenge pressure, accompanied by increased specific fuel consumption. Increasing the speed from 1 500 to 2 000 r.p.m. reduces the indicated pressure by reducing the weight of the cylinder charge. The specific fuel consumption, the utilisation of the scavenge air, the scavenge air coefficient, the excess air coefficient, the indicated pressure and the power have been plotted against the scavenge air pressure (Figure 4). It is concluded that the gas-exchange process has not been fully effective. Increasing the size of the inlet and outlet ports would be necessary. The indicator diagram (Figure 5b) shows an adequate fullness in the idle stroke region and a relatively low value of the maximum pressure. The superiority of the tested engine compared with the Ricardo engine operating under similar conditions (e.g. "Aircraft Engineering", 1950) is claimed. The engine components have worked satisfactorily except for some seizures between the inlet

disc and cover. Apart from reduced cylinder length, the basic advantages are: the elimination of reciprocating distribution gear and the removal of the piston from the exhaust gas zone. The mechanism can be used in a two-stroke Diesel engine. There are 5 figures.

S/145/62/000/005/008/008
D262/D308

AUTHOR: Khaylov, M. A., Doctor of Technical Sciences, Professor

TITLE: The use of pulse turbines

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Mashinostroyeniye, no. 5, 1962, 183-187

TEXT: The material in this article is obtained as a result of approximate research calculations. The author investigates the pressure changes in the outlet piping of the engine cylinder at various working conditions of the engine, and for various back pressures; the effect of back pressure on the characteristics of the wave impulse reflection at the exit to the atmosphere and through the exit pipe junction. It is concluded that the exhaust gases leaving the cylinder and accompanied by the formation of a wave momentum can affect considerably the operation of the turbine connected to the engine. The passage of the momentum through

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the turbine without reflection confirms the possibility of the effective use of the front part of the wave carrying the main part of the energy of the exhaust gases. There are 6 figures.

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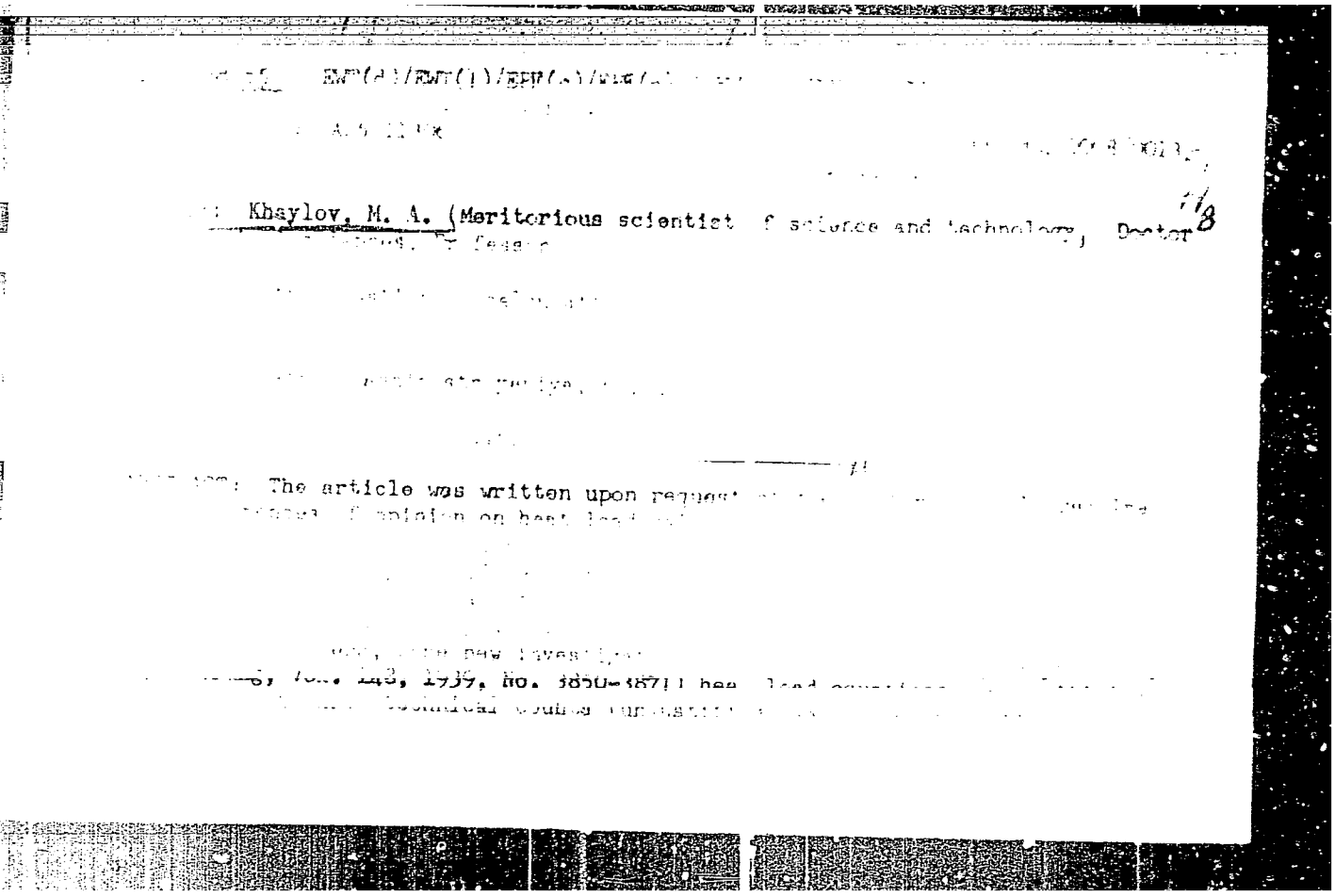
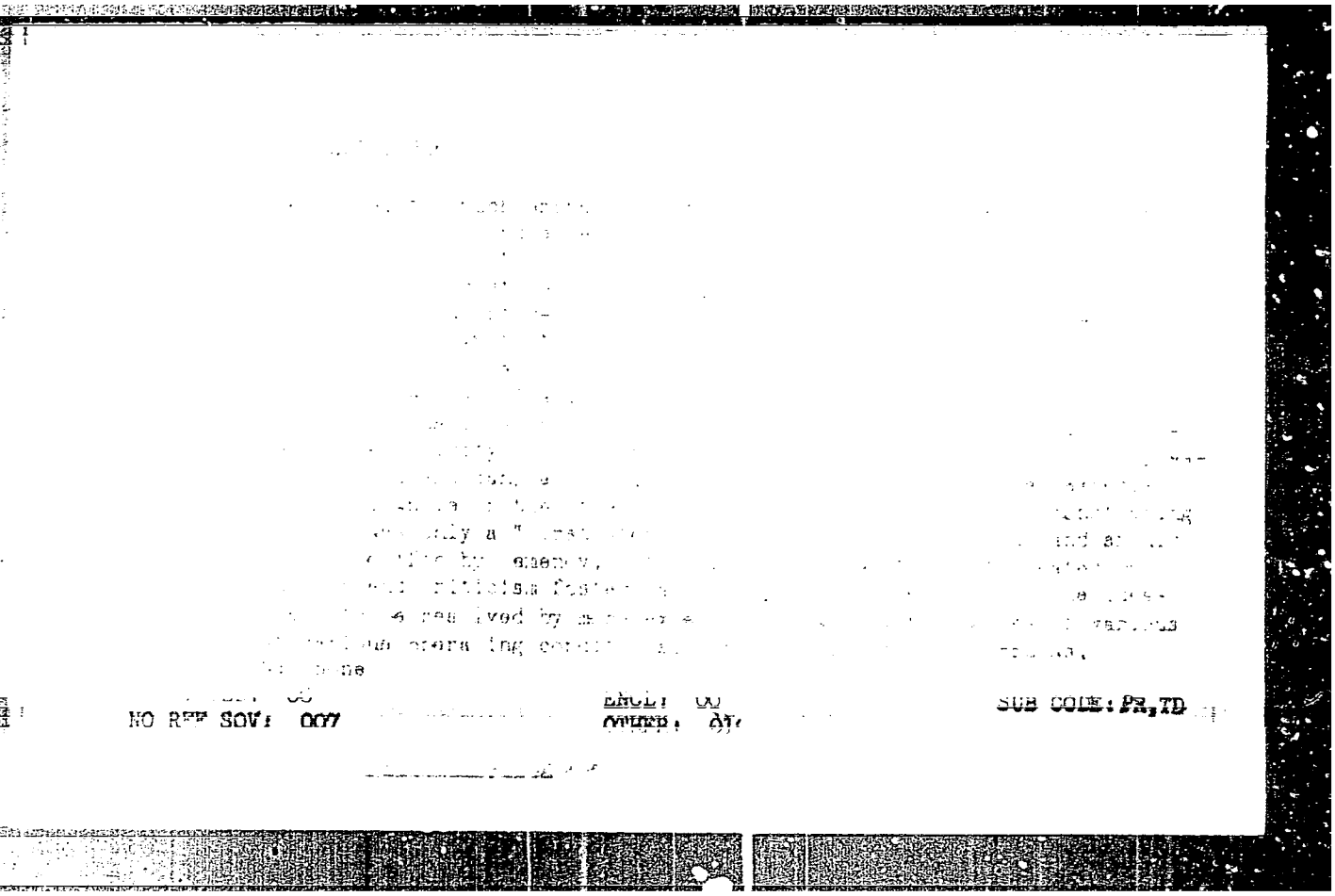
LYSHEVSKIY, A.S.; KHAYLOV, M.A., doktor tekhn.nauk, prof., retsenzent; PALEYEV, N.M., inzh., red. izd-va; MEL'NICHENKO, F.P., tekhn. red.

[Processes of fuel atomization by diesel jet nozzles] Protsessy raspylivaniia topliva dizel'nymi forsunkami. Moskva, Mashgiz, 1963. 178 p. (MIRA 16:6)
(Diesel engines--Fuel systems)



Khaylov, M. A. (Meritorious scientist of science and technology, Doctor

The article was written upon request



NO REF SOV: 007

SUB CODE: PR,TD

KHAYLOV, M. S., Prof.; SEMENTSOV, K. A., Eng.

Gas and Oil Engines - Testing

Static blowing through a gas distributor of a two-cycle engine with direct valve-slit flow. Vest. mash., 32, No. 3, 1952.

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